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U. S. DEPT. OF AGRICULTURE

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

APR 9 - 1921

REPORT FOR WEEK ENDING APRIL 9, 1921.

Akron:

All the spring seeding was finished the fore part of the week with the exception of some barley varieties and selections to be seeded on the Cereal Project. Winter wheat in most cases came through the winter in good shape with the exception of Rotations 26, 97, 81, and M-C A. Wheat is seeded on disced corn stubble in the first three rotations mentioned, and the ground was too dry to germinate the seed, or at least too dry to produce an emerged stand last fall. Germination has been very poor this spring, so that not more than half a stand is visible on any of these plats. Generally speaking, wheat over the country side is about normal for this time of the year. Spring gives every promise of opening early.

Septicaemia Hemorrhagica broke out among the sheep this spring and two ewes were lost before preventive measures could be brought into play. This disease has been very prevalent in this region among cattle and hogs this past winter, but there being very few sheep nearby an outbreak was hardly expected in the flock here.

Ardmore:

The snow fall during the fall and winter months was greatly below normal. The total snow fall for the months October 1920 to March 1921, inclusive, amounted to 42 inches. This snow was very "light" in character and the total precipitation for the same period, including melted snow and some rain was 3.42 inches. The snow fall for the same months last year was over one hundred inches.

The ground is dry and there has been much surface moisture lost by unusually high winds for this season of the year. Soil moisture determinations have shown the moisture content of the soil to be considerably below normal for April. There appears, however, to be sufficient moisture to bring all crops through the ground.

Active field operations started on the field station on March 14, and have continued practically without interruption from any cause up to the present time. Considerable seeding of small grain was done in March and much of it is now emerging through the ground. The work accomplished on the station so far includes seeding of about 110 acres of oats; the seeding of all small grain plats and fields of oats, barley, rye, and wheat; and the seeding of several acres of brome grass, sweet clover, and wheat grass (Agropyron desertorum). Thirty acres of ground is ready to seed to Grimm alfalfa and same will be seeded at once.

Farmers generally have taken advantage of the favorable weather conditions and have seeded their small grain. There has been an unusually large acreage of wheat seeded this spring, due to the favorable weather conditions for farming operations and the low price of seed wheat. Much alfalfa will be seeded through the county this spring.

Winter wheat and winter rye are in excellent condition. The acreage of these crops is not large in the county.

Cattle and horse have come through the winter in splendid condition, due to the mild weather and an abundance of feed.

The maximum temperature for the week was 80; minimum 8; precipitation .02 inch. This all the precipitation that has been recorded during the month of April. The total precipitation for the month of March was .07 inch; the normal for the same month being .63 inch.

Belle Fourche:

Favorable weather up to about April 5 favored land preparation and seeding. All land on the dry land rotation is ready for planting. The wheat, oats, and barley were seeded on April 2 and 4. Since the 5 the weather has been much colder, though there has been only a small amount of snow.

This has been one of the most favorable springs ever recorded in western South Dakota. The amount of grain now seeded, corresponds favorably with the amount usually in by May 1.

Losses of stock last winter were small. The winter was so open that very little feeding was necessary. As a result there is now a large amount of hay on the project that will not be fed and for which there is no sale.

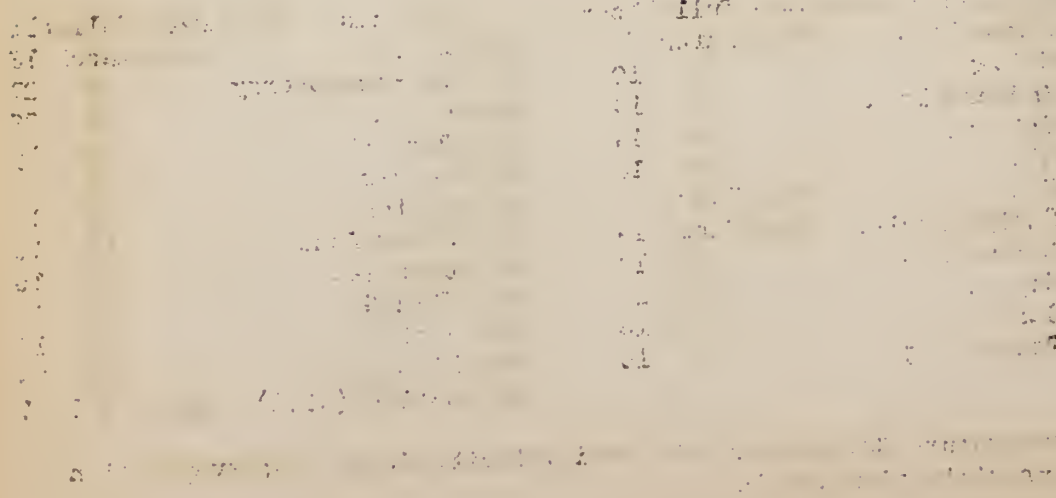
Maximum temperature 81; minimum 9; precipitation .21 inch.

Big Spring:

The weather for the winter has been mild and pleasant with very little wind movement and no sandstorms of any consequence has occurred. There is a good season of moisture in the subsoil, the soil being wet from two to three feet deep. The precipitation to date runs as follows: January .25 inch; February .71 inch; and March 1.34 inches, making a total for the three months of 2.30 inches. The average for 21 years for this period is 1.84 inches. In the field most of the plowing has been done. The fields used for variety testing and field crops have been worked down and put in shape for planting. Peanuts have been planted in the rotation plats and two four acre blocks in field three have been planted to milo and peas and kafir and peas. The planting of the other rotation and variety plats will be done as soon as the weather conditions will permit. Winter wheat is growing nicely and is beginning to stem rapidly and ranges from four to eight inches in height. The fruit in the experimental orchard and vineyard has not been killed to date and a bumper crop is in prospect for this season. On March 28 and 29 the temperature dropped to 30 and 32 degrees, respectively. The section of west Texas to the north of us suffered severely from the freeze on the 28 and 29 of March, with the result that most of the fruit was killed. The date of blooming of some of the principal varieties of fruit range as follows:

Peaches	Date full bloom	Plums	Date full bloom
Mamie Ross	March 8	Eagle	March 18
Salway	10	Compass Cherry	27
Indian Blood	14	Omaha	28
Triumph	14	Burbank	15
Elberta	10	Weaver	27
Honey	Feby. 25	Milton	19
Early Wheeler	March 14	Early June	16
Lemon Free	14	Gonzales	16
Superb	16	Wild Goose	16
Carman	14	Funk	12
Texas King	16	Minco	24
		Native (wild)	April 1

Maximum temperature 84; minimum 40; wind velocity 8.6 miles; evaporation 2.08 inches; precipitation .09 inch.



Colby:

Winter wheat on all plats has come through the winter in good condition. Winter wheat on all plats except the continuous stubbled-in on milo and corn ground looks uniformly good. In fact we are of the opinion that the wheat is too far advanced for this time of the year, except on the plats noted above. Spring is up uniformly good on all plats. Barley is coming through on all plats. Oats are just beginning to come up good. The cold weather the last part of the week nipped the tips of the leaves of all grains.

There is slightly less than the normal amount of moisture in the surface foot, while in the second, third, and fourth feet there is slightly more than the usual average amount. Soil moisture sampling was started the previous week and continued during the present week.

No damage has been done to any of the station plats by spring blowing. Precipitation for the week .16 inch; maximum temperature 85; minimum 21.

Dalhart: Report, week April 4.

The weather conditions for the past two weeks has been unfavorable. There has been a high wind movement, causing soil blowing to a great extent, in this section. No soil blowing occurred on the station as it had been previously cultivated. There was a light snow last week accompanied by heavy winds.

Hard freezes have occurred in this section in the last two weeks, killing all fruit that had been in bloom. The warm weather during the winter caused the trees to begin to leaf out, fruit buds to open early, and grass to green up. The trees and fruit have been given a setback, but the grass is uninjured.

Several hundred shade trees were given away by this station the first of March. Many farmers availed themselves of this opportunity to improve their treeless farms. These trees were mostly from cuttings which were planted last spring. More cuttings were planted a short time ago for distribution next year.

Some spring plowing was done the first of the month in which volunteer rye was turned under for the planting of corn. Plats W and X of the listing methods (milo) were listed today. Oats are coming up in fine shape and prospects are favorable for a good yield this year. Winter rye is looking good and is covering the ground. Winter wheat in this section of the Panhandle is reported as looking good. This, however, is on the hard land which is not bothered with soil blowing. Wheat on the more sandy land will not compete with rye.

Dalhart:

One nice day was substituted for a windy one in the busy rush of the weather conditions. Just before dinner on the 4 a sudden rain blew up accompanied by considerable hail. The hail was small, about like "peas", and did no damage. This is all the precipitation that fell this month, of any consequence. Several days have been quite cold the past week.

Field work for the week consisted of plowing and some cultivating. The soil is turning over in fine shape, with plenty of moisture present. The plowing is being done at this time to kill a volunteer crop of oats that survived the winter. Some tree planting was done during the week, also pruning of some of the larger trees.

Dalhart, continued.:

The small grain crops are looking good and making fair progress. Sweet clover is coming thick on one series that has been in clover for two years. The crop went to seed last fall and a good stand is coming up in a crop of oats.

Havre:

The winter season has been unusually mild and the early part of the season has been drier. November, December, January, and February were all above normal as to temperatures. The precipitation for these months is as follows: January .05 inch; February .06 inch; March 1.81 inches, that for March being nearly five times the normal for 41 years.

Although practically none of the winter wheat germinated last fall, the prospects at present are unusually good for a stand. The growth as well as the stand is at present better on fallow and corn land than it is on land that was plowed last fall. On the latter some of the plants apparently partially germinated last fall and later dried out to such an extent that the plants died. Winter rye is generally good on the station even on fall plowing, and the reports from the surrounding country are favorable.

There has been no field work on the station yet this spring. There was some spring wheat seeded the last week in February and some plowing and seeding the last week in March in this county. Unless conditions continue favorable there will be a reduced acreage in this immediate section of the State.

Hays:

The climatic conditions during the late fall and winter were such that the physical condition of the surface soil was reduced to a condition which was very favorable for soil blowing.

Heavy winds during January and February started the soil on many of the winter wheat fields moving, and quite a little damage was done during February. Frequent heavy winds during March greatly increased the damage in this section of the country. There are certain localities where practically all the wheat has blown out, as much as 1,000 acres. In other localities it is about half out and in still other localities the damage is slight.

It has been estimated that 50 per cent of the wheat in this county has been blown out. I think perhaps this may be a little large for the amount lost due to blowing alone, but after considerable wheat had been slightly damaged, and which would have recovered under fair conditions, it was killed by a sudden drop in temperature - to about 10 degrees above zero on March 28 - and it again dropped to 15 degrees above on March 30. These freezes were accompanied by several days of 28 to 30 degree minimums. These freezes killed all late and backward wheat which had not been damaged by blowing. It appears now that the loss of winter wheat due to blowing and freezing together is not less than 50 per cent. Quite likely in this county it is more nearly 60 per cent.

The station is a heavy loser, having lost three fourths of its commercial fields. The Dry Land project has, under the circumstances been very fortunate in having lost no plats of winter wheat from blowing. However, seven plats seeded on corn and kafir stubble ground, and the late fall plowed ground upon which the wheat had made a less vigorous growth, and some of which had suffered slightly from blowing, was damaged very badly by the freezing.

Hays, continued:

On some of these plats there seems to be as much as 85 per cent absolutely killed. The wheat on the remainder of the project is looking very well, in fact, there is still more growth than there should be at this time of the year. The freeze checked the growth for a few days which was a very good thing for this wheat.

Generally through the county the fields that have suffered most are those which were seeded late, or on fields where the soil was worked too much and too late. The disc, or rather the improper use of the disc deserves its share of the credit for the damage in this section.

Two inches of rain on April 4 and 5 has improved conditions a great deal. All spring grains seeded on the Dry Land Project March 22 and 23 are coming up nicely and do not appear to have been damaged by the freezes.

The station is now busy reseeding the blown out wheat fields to barley and likewise the farmers are sowing a large acreage of barley this spring. The ground is in fine condition for seeding since the rains.

Huntley: Report, week April 2.

The past winter has been an unusually mild and open one. Temperatures have generally been above normal, there being but two "cold snaps" when the mercury dropped below the zero mark for more than two or three days in succession. The first of these occasions was the third week in December, when the minimum for the winter was reached. This minimum was 26 degrees below zero. During the middle of February a low temperature of 18 degrees below zero occurred.

Wind velocity has been somewhat above normal, and in some sections considerable damage has been reported from soil blowing. This occurred chiefly on summer fallowed land.

Precipitation for the period September 1 to March 31, inclusive, totaled for the past winter, 2.98 inches, while the normal for that period is 6.64 inches. The months of September, October, and November were particularly dry. Snowfall was very light and the snow that did not blow away melted a day or two after it fell and the wind quickly dried up the small amount of moisture thus formed. Where the snow accumulated in drifts before melting, the moisture supply was greater.

Because of the dry seed-bed in September, winter wheat was planted comparatively deep to avoid germination and subsequent killing out, due to light and scattered showers. Much of this seed was germinated from time to time during the winter - in spots over the field - where there was sufficient moisture from melting snow to penetrate to the depth of planting. Some of this germinated seed made enough growth to reach the surface of the ground while the rest of it was just beginning to sprout or was in a swollen condition before it dried up. The seed which had not germinated during the winter has been started by the March precipitation and is now coming through the ground. From present indications the stand promises to be extremely thin on most plats, and it is possible that these plats may have to be reseeded to spring wheat.

March precipitation has put the ground in shape so as to make a fair job of spring plowing possible, and this has already been finished on the rotations and on part of field G. Discing and harrowing of corn stubble land and summer fallow has been completed on field H. Fall-plowed ground was just as cloddy and dry this spring as it was when plowed last fall. This is an unusual condition as generally fall plowing works down into a finer seed bed than spring plowing in this section. By using a heavily weighted roller, disc, harrow and in some cases rolling again, most of the clods were broken up and crushed into the ground where they will have a better chance to soak up when it rains.

Huntley, continued:

The last few days have been warm and alfalfa, brome grass, and weeds have begun to show green. Volunteer grains are conspicuous by their absence this spring.

Maximum temperature 80; minimum 15; precipitation T.

Huntley:

Monday was the only day during the past week when field work has been possible, owing to snow, rain, and sleet storms, occurring Tuesday, Wednesday, and Thursday. Since then the ground has been too wet to work. The time has been devoted to cutting and painting about 1100 plat stakes for use on the various projects on the farm.

Maximum temperature 80, minimum 20; precipitation .40 inch.

Lawton:

As a winter month January was very mild. The minimum temperature ranged from 17 to 55 degrees and the maximum ranged from 32 to 74 degrees. The wind movement was about the average for the month, ranging from 1.4 to 11.5 miles per hour. The precipitation was very slightly above normal. On the 11 and 13 snow fell to a depth of two and one half inches and four and one half inches respectively. The latter amount is considered as rather heavy for this country.

Mild weather continued through February until about the 18, when snow fell to a depth of seven and one half inches, on the level. At the beginning of the storm the snow was wet and melted to a considerable extent. This is one of the heaviest snow storms ever recorded in the southwestern part of the state. On the 19, the minimum temperature registered 10 degrees above zero, which was one of the lowest points reached during the winter. Relatively mild temperatures quickly followed the storm and the snow did not remain long.

The mean temperature for the month was a little above normal. The maximum ranged from 31 to 79 degrees, while the minimum varied from 10 to 42 degrees. The wind movement for the month was about normal. The velocity (wind) varied from 2 to 13.2 miles per hour. A wind velocity of more than 10 miles per hour for a 24-hour period was exceeded only on four dates. Precipitation for the month was only .20 inch above normal.

The month of February as a whole was unusually favorable for farm operations of all kinds. Vegetation showed signs of very early growth.

Fruit trees, shade trees, and ornamental shrubs budded very early and some of them were displaying minature leaves by the first of March. Winter wheat made a very good growth during the month and oats seeded at this time resulted in good stands within a very short time.

The mild winter weather enabled cotton farmers to gather the last of their crop. Picking was continued in some fields as late as March 15 to April 1. The market ranged from 1¢ to 5¢ per pound. Wages for picking finally dropped to about 1½¢ per pound. It is estimated that Comanche county ginned about 16,000 bales of the 1920 crop. The acreage of the 1921 crop in this county will be reduced about 50 per cent, according to present estimates.

The mild winter was very favorable to forage and truck crop insect pests of all sorts. The Green bug infestation from Texas made its first appearance in Love county, Oklahoma early in February and spread rapidly as

Lawton, continued:

far as southern Kansas by March 14. Although there has been some damage in this county the present indications are that [illegible] parasites will largely control the Green bug. Orange Leaf Rust appeared early and considerable damage was showing during the latter part of March. The damage at the present time, however, seems to be somewhat abated. Chinch bugs showed up very early in the season and are more numerous than usual at this time of the year throughout the county.

Considerable material for oil emulsion spray solution has been prepared on the station to combat the infestation if it becomes necessary to do so in the near future.

Several heavy frosts have occurred during the first 10 days of April and the weather has been cold, windy, and disagreeable. A wind velocity of 15 to 18 miles per hour during the day time has generally prevailed up to the present time, this month. On the 28 and 29 of March heavy freezes killed practically all of the fruit in the State. It is reported that there may be a few apples and present indications are favorable to a fair production of small fruits, especially strawberries and dewberries.

Corn was planted on the station April 12, which is a little later than usual. The delay was caused by cold, wet weather. Oats were planted on the 16 of February and good stands were obtained. About 14 acres of oats were also planted for feed.

Alfalfa was seeded on cane stubble without any preparation, on March 17. Although this is considered an unusually poor method of preparation an excellent stand was secured. This work was done on a small tract of land with the idea of gradually preventing washing, which has given considerable trouble.

All field work is up in excellent shape and considerable time has been spent on repair and improvement of roads which lead to the west end of the station.

The Cooperative Crop Reporting Service of the State estimates the present condition of wheat at 89 per cent of normal, or 7 per cent better than the average for wheat for the past ten years, on April 1.

Farm labor supply is reported as one fourth greated than a year ago, and as 97 per cent of normal, while the demand is only 73 per cent of normal.

North Platte:

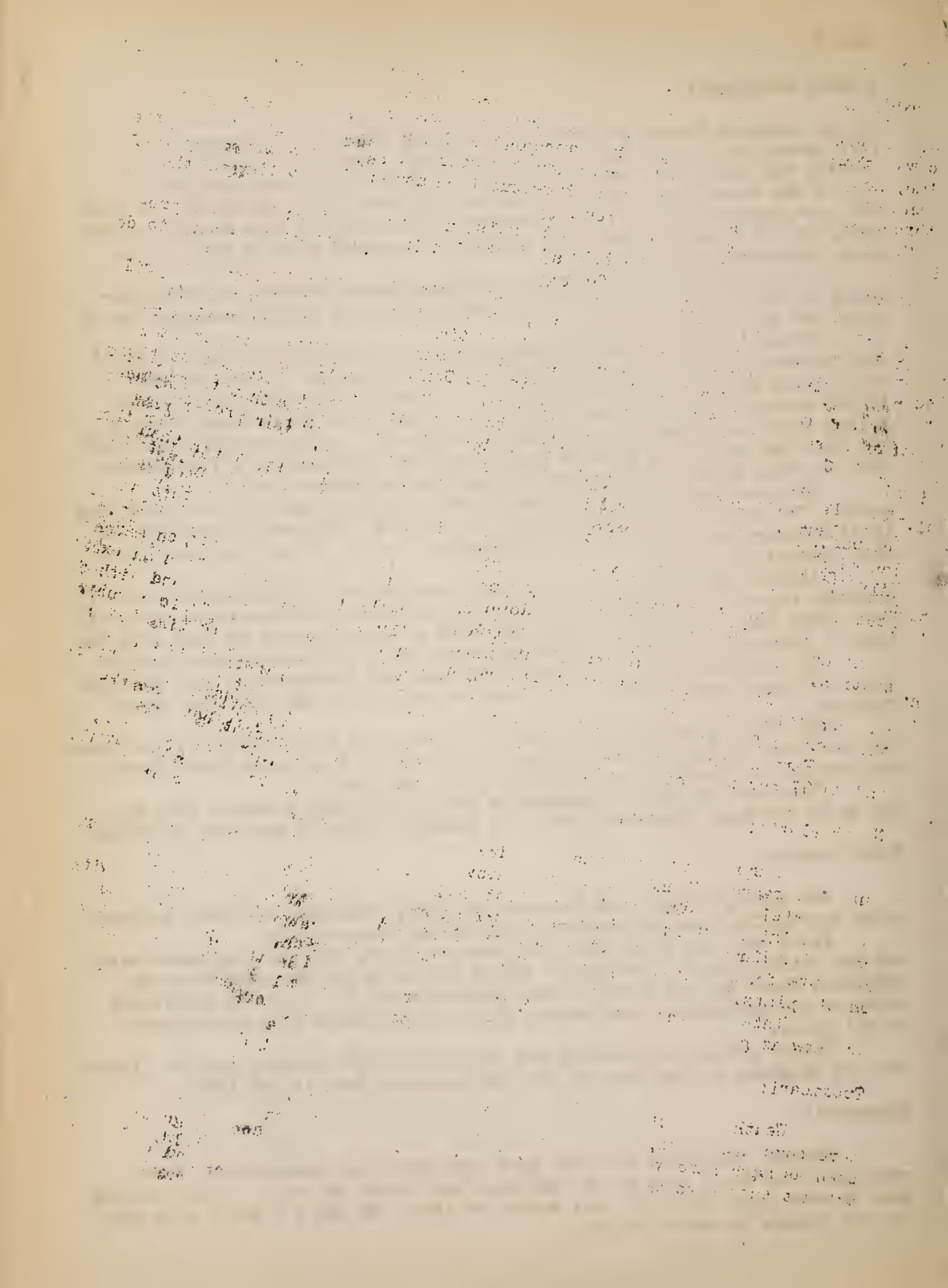
The spring to date has been dry and open. February and March temperatures averaged 9.7 and 8.1 degrees above normal respectively.

Field work was begun the first week of March, and has progressed with but few interruptions. Seeding of spring grains on the Dry Land Plat was completed March 24, and potatoes were planted April 2. There is sufficient moisture for germination, and spring grains have emerged with good stands on all plats.

Winter grains came through the winter with fair stands, and the fields are now as green as they were on the corresponding date in May 1920.

Tucumcari:

Weather conditions here the past week have been changeable. There were some nice days, some windy, and some both windy and cold. There has not been as much hard wind here this spring as last. On the 4 a small rain fell bit not enough to amount to much.



Tucumcari, continued:

Field work for the week has consisted of hauling manure, listing, hauling water to the cattle, cutting stalks, fixing fences, trimming hedge and planting 100 western yellow pine. Last week 100 Juniperus-monosperma were planted. These trees were furnished by the Forest Service by request.

Trees are in leaf here and some fruit is in bloom. The peaches and all the early fruit perished in a recent freezing spell.

One steer in the steer feeding experiment had to be killed a few days ago. He ate too much, got indigestion, bloated, and was ruptured. The bloating caused a severe rupture which rendered the animal useless. All the possible aid failed to help in the case. The medicine administered helped to open the bowels but the action was too slow to benefit. This feeding test will end next week , on the 15, but will be carried over until the 13 or 20 before slaughter tests will be made. All other cattle are doing nicely. Grass is greening up and pasture will be considerably earlier than last year.

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APR 1921

REPORT FOR WEEK ENDING APRIL 16, 1921.

Akron:

The fore part of the week was favorable for field work, and seeding on the Cereal Project was finished. First date and variety experiment with corn was planted and some discing of increase fields was done, the tractor being used for this latter work. At odd times work was devoted to building gates for the sheep pastures and in repairing the windmill. An important casting of the windmill broke the fore part of the week, so temporarily we are without the use of the Hydro-Pneumatic system.

By far the worst storm of the winter burst upon this region Thursday, and continued until today (Saturday). It is yet too early to get figures on the total precipitation, but it is expected that it will amount to about two inches. Though very hard on stock this storm will prove of inestimable value to crop prospects for the coming season.

Maximum temperature 76, on the 12; minimum 16, on the 10; precipitation not determined.

Big Spring:

The week has been dry and windy, with no precipitation. Last week we reported that we had had no sandstorms of consequence this year. This week changed this condition and we have had three bad sandstorms the last half of the week. Not much damage has been done on the station, but some cultivating will have to be done in the fields to stop the drifting soil. This morning (Saturday) a hard cold wind is blowing from the north and it may get cold enough for frost or freeze. The date plantings were made on the 15, but owing to the top soil being dry it will be hard to secure a stand on these plots unless we get a rain within the next few days. Considerable soil blowing has occurred on the sandy land farms to the north of the station. The hard west wind yesterday and the day before has blown off lots of the peaches and plums from the trees. However, an extra heavy crop of fruit had set on the trees and this thinning will be an advantage, unless the entire crop is killed by a late freeze.

Maximum temperature 87; minimum 35; wind velocity 8.5 miles; evaporation 2.08 inches; precipitation 0.

Colby:

The past week has not been conducive to good growth on any of the grain plats. The second lowest temperature of the year was recorded on the 10. This low temperature nipped the spring grains which were just coming up to a good stand, but the warmer weather during the middle of the week caused them to recuperate so that no damage will probably result. Moisture sampling was continued during the week and some difficulty was experienced in getting the evaporation oven to maintain a uniform temperature.

The first rain of the growing season came this week. There is a good amount of moisture in the surface foot now. This was badly needed as the surface foot was exceptionally dry for the small grains just seeded. A snow the night of the 15 of about three inches drifted considerably.

Maximum temperature 85; minimum 8; precipitation 1.64 inches.

Dalhart:

Weather conditions for the past week have been very disagreeable; high winds have prevailed all week with the exception of one day. Most of the time it has been cold with considerable freezing. One rain occurred during the week amounting to one half an inch. Two other small showers fell, but not to do much good.

Field work for the week consisted of plowing, dragging roads, pruning trees and planting arbor vitae in the windbreak strip to replace ones that died last year. Plats 166 and 167-B were plowed at this time in order to turn the volunteer rye under before it got large enough to sap the ground. Plowing in the general field was completed during the week. Some clay and other dirt was hauled and put in the low places around some of the buildings where the soil had blown out considerably. There still remains some hauling to be done in order to finish the filling.

The seed for spring planting which was stored in the head during the winter is being threshed and cleaned. There still remains several days work with this threshing and cleaning. This work is being done on days that are too disagreeable to work outside.

Maximum temperature 76; minimum 18; precipitation .52 inch.

Dickinson:

Field work was started on the station March 19, when discing was started on sod. Due to stormy weather not much was accomplished until April 1, and seeding of increase wheat was begun April 2. Another cold spell stopped field work until this week, which has been favorable. Plowing on the rotations has been completed, and if favorable weather continues wheat, oats, and barley will be seeded early next week. Wheat varieties for the Cereal Project have been seeded, together with practically all of the increase wheat.

The past winter has been the most open and favorable of record at this station. A minimum temperature of 23 degrees below was recorded December 27, but this and all other cold spells have been of short duration. January and February 9.5 and 12.5 degrees above the average for those months, while March was above the average in mean temperature. There has been less than average snowfall, but the soil is in excellent condition for tillage operations.

Maximum temperature 65; minimum 13; precipitation .02. Precipitation for January was .23 inch; February .35 inch; March 1.01 inch; and April to date .31 inch.

Garden City:

The weather during the past two weeks has varied from the fine growing weather of spring to freezing temperatures and blizzards of winter. The temperature dropped to 17 degrees above zero on the night of April 10. This freeze did very little damage as the two freezes ten days previous killed all of the fruit blossoms that were out at that time. Today, April 16, we are having a regular blizzard, and snow storm, with the temperature down to 26 degrees above zero.

We have had a good many days of high winds this spring which caused considerable damage to the winter wheat, due to soil blowing. The damage due to soil blowing this year was much less than that of last spring. Up to April 5 the soil was so dry that it did not require much wind to start it moving, but a half an inch of rain on this date moistened the ground to such an extent that we have had no trouble from blowing since.

Garden City, continued:

The small spring grains which were planted the last of March are up to a good stand, but are growing very slowly because the soil has not warmed up to any extent as yet. A two inch rain fell this week, which ought to give the small grains a good start, as soon as it warms up.

Maximum temperature 85; minimum 16; precipitation for two weeks 2.57 inches.

Havre:

Plowing on the rotations was started on Monday of this week, and as there have been no interruptions the preparation for seeding is nearly complete on all small grain plats. It was noted in the plowing that all plats that were in stubble during the winter contain much more moisture than do the plats that were in corn last season. Some of the latter that were on the high land of the project were moist only to a depth of four inches, while the stubble land was moist to adepth of from eight to twelve inches. The varieties of small grains is the only seeding that has been done on the station; however, in the community seeding is well under way.

Mr. Campbell, county agent for this county, reports that his office has sent in over a thousand applications coming under the Federal Seed Loan Fund, and that he has not been able to obtain nearly enough blank applications to supply the demand to farmers of Hill county. From present indications it would seem that there will be not more than forty per cent of the plowed land of this county that will be seeded. Had it not been for the Federal Seed Loan Act, which provided loans for seed, this percentage would have been much lower.

Weather during the week has been characterized by strong cold east winds, with much threatening weather. There was, however, only .03 inch of precipitation. The minimum reading of 24 degrees was recorded on the night of the 15.

Hays:

All the spring grains on the project are up to a good stand and are apparently not being damaged by the freezes, unless the blizzard of last night caused injury. This morning the ground was covered with about an inch of ice and snow. The effects of this storm on the crops cannot be reported at this writing.

The fields are very wet and the roads heavy.

Maximum temperature 77; minimum 21; precipitation on the mornings of the 13, 14, 15, and 16 total 1.60 inches. This amount following 1.99 inches which fell during the previous week kept the ground too wet to permit of any field work, except some staking and hand work. Three nights during the week the temperature dropped below the freezing point.

Huntley:

Fair weather has permitted field work every day this week. The snow and rain of a week ago did much to soften up the clods in the plats which had been rolled previously and by again discing and harrowing them good seed beds were obtained.

All seeding has been completed on the rotations with the exception of corn and brome grass. It has been too windy to seed the latter. In the pasture rotations seeding has been completed except for corn. The ground for the duplicate perennial pastures and for the miscellaneous crop work is in shape for planting and the plats have been staked out.

Huntley; continued:

Winter wheat and rye growth is discouraging and farmers are reseeding their fall wheat ground to spring wheat. Stubble and grass land is very dry and but little growth has started on the range.

Maximum temperature 72; minimum 17; precipitation 0.

Lawton:

Cold, disagreeable weather has prevailed the past week with the exception of two days. All corn plats were planted the 12 and date plantings of grain sorghums, forage sorghums, and cotton were made the 14. Some harrowing and discing was done early in the week and spring plowing was begun the 15.

Wind velocity for eight hours, beginning 8.00 a.m. this date (the 16) has averaged 26.2 miles per hour. Very little blowing has occurred, but the surface soil is drying rapidly and will move soon unless the wind velocity decreases.

Maximum temperature 77; minimum 32 on the 11; precipitation .21 inch; average wind velocity 8.0 miles per hour.

Mandan:

Horticulture.

Cabbage, celery, and tomato plants for the farm garden have been transplanted in flats in the greenhouse. Four hotbeds have been started and partly filled with tomato plants for the breeding plat.

The lawns were raked and some replanting of shrubbery was done on the grounds. The land now being in fine condition, harrowing of several field plats was commenced the latter part of the week. The mulch on the fall planted seed beds was removed.

Agronomy.

The past winter has been very mild, perhaps one of the mildest in the history of the State.

The precipitation for the winter has been below normal to the first of April. The soil at the present time is rather dry, and is not in as good condition for seeding as in the spring of 1920.

Field work on the rotations started on April 4, but was delayed because of cold weather and light blizzards. The rotations are now being lined up and will be ready for seeding early in the week.

Date of seeding of flax and the seeding of wheat varieties for the Cereal office will be finished today.

The winter wheat which was seeded on the station last fall under different conditions has not come through the winter. If winter wheat cannot come through as mild a winter as the one just past, it seems that there is not much use in seeding it.

Arboriculture.

Field work began April 1, when breaking was done in a portion of the cow pasture that is to be included in the shelterbelt nursery field. Plowing was done on various small experimental plats in which trees failed entirely last summer.

Discing and harrowing in Field E and Field O was done preparatory to planting as soon as shipping is over.

In order to get a start on the blister beetle all caragana hedges were cultivated April 1, in order to disturb the eggs of this beetle and the grasshopper eggs on which the young beetle larva feed. It is hoped that by doing this quite a number may be destroyed before they hatch out.

Mandan, continued:

Shipping began the 14 , of stock for the demonstration shelterbelt plantings in Wyoming, South Dakota, and western Montana. Both deciduous and coniferous stock is being shipped as usual this year. Up to date 190 shipments have been made.

North Platte:

April weather to date has been less favorable to crop growth and the accomplishment of farm work than was most of March. High winds have blown almost continuously. The average wind velocity at the Table station for the half month ending today is 11.5 miles per hour. Two attempts at rain have both turned into snow. The precipitation record for the half month is less than one half an inch. The minimum temperature was 18, and the maximum 82 degrees. Most of the fruit appears to be killed. Spring grains have been frozen back, but no serious injury seems to have been done.

Scottsbluff:

Weather conditions here the past week have been favorable for field work. The spring apparently is opening up somewhat earlier than last year. We have been able to get the spring tillage work completed and wheat and oats have been seeded.

Winter precipitation here has been unusually light and the soil was quite dry in preparing the seed beds. Considerable damage was done by soil blowing during the heavy winds in March. However, winter wheat and rye look very good with the exception of the borders of the plats, which were slightly blown out. But little growth has taken place this spring as freezing weather occurs yet most every night.

Maximum temperature 79; minimum 15; precipitation .26 inch.

Sheridan:

Field work has been possible at least a part of every day during the past week. One rain occurred, .4 inch falling on the evening of the 11. While this rain delayed some of the field work, it put the surface soil in much better condition to work than it was.

There is a fairly good supply of moisture in the surface soil that was in stubble during the winter. The weather throughout the winter was quite mild. The soil went into the winter very dry. There was some snow in the fall and a little at times during the winter and during the last month that helped land in stubble, but fall plowing and corn ground still remained quite dry. Field work was begun March 18 and has been continued intermittently since as the weather permit.

Discing the fall plowed rotation plats was begun March 18, and all plats to be disced were finished on the 24. Sweet clover to be seeded early according to a new outline received from the Forage office, and the first date of seeding for spring wheat were seeded on the 23. Silvermine oats for increase and feed, and Sixty Day oats for feed were seeded on the 25. The second date of seeding for spring wheat was seeded on April 4, and the third was seeded on the 15. All of the plats for spring wheat, oats, and barley have been prepared for seeding (rotations). The spring wheat in the rotations was seeded yesterday (Saturday). All of the ground for the Forage crop work has been plowed and D. disced once. That for the Cereal work has been double disced, and the rest of the ground for feed oats has been double disced.

Sheridan, continued:

Winter wheat seeded November 1, in the last date of seeding began to emerge during the week. The winter grain in the rotations did not emerge last fall, but warm weather the last of February and the first of March caused it to emerge about the first of March. The early seeded winter grain in the rates and dates of seeding emerged last fall only in spots, but the rest of it has come through during the last month. Apparently there was no winter killing and there is a good even stand of all of the fall seeded grain, with the exception of the early seeded, as noted above. The first date of seeding and the oats emerged during the week.

Alfalfa began to show green about the 2d of this month. Brome began to start about a week earlier than the alfalfa, and somewhat earlier than the native grass. Sweet clover began to show only this week.

Maximum temperature 70; minimum 23; precipitation March .65 inch; precipitation April up to date .84 inch; past week .40 inch.

Tucumcari:

On the 14 and 15 there occurred the worst wind storm of the season. There was an overcast sky with threatening rain, small showers occurring at times but with no beneficial results. The air was cold and disagreeable.

There was some soil blowing in the south field, on the east side, but not to any considerable extent. Another cultivation will put the field in shape for another blow. Field work for the week consisted of fixing fences, hauling water to the cattle, raking dead grass from the orchard, and discing same to kill the young growth of weeds. Some clay was hauled for the roads.

The cattle were weighed on the 15. All have made a good gain and are looking good. The steers in the fattening lot have made an extra good gain and are in fine shape for slaughter. The feeding experiment was to have closed on the 16, but on account of its ending on Saturday it was extended to the first of next week, so the meat could be disposed of. Mr. Foster of the State College will visit the station at the close of the experiment for consultation.

Every thing in the Tucumcari section is much farther advanced that in northwest Texas, in the Dalhart country.

Woodward:

The past winter was a very mild one in this section, the minimum temperature at this station being 9 degrees above zero. We had a considerable amount of precipitation but very little snow. The fore part of the spring was also very mild, causing the fruit to bloom very early. Some of the earliest blooming peaches were in full bloom by March 7. All of the other tree fruits bloomed correspondingly early. A very severe freeze on March 28 killed all of the peaches and mulberries and pears, and most of the cherries and plums. A good many of the apples were also killed. Another freeze about a week later froze some of the varieties that bloomed after the first freeze. A few of the grapes were far advanced to be frozen at that time.

All of the wheat and rye on the plats is far enough along to be jointed, and some of the rye is beginning to head. All of the wheat and rye seems to have come through the winter in good shape and with a good stand, though it is rather spotted where it was planted on disced milo and kafir ground, and rye is very poor on a plat which is a duplicate of the MCA except that it is disced at planting time instead of plowed.

Some plowing was done on the Cereal Project during the week, also a little cement work and some work on the roads.

Maximum temperature 69; minimum 35; average hourly wind velocity 9.4 miles per hour; evaporation 1.252 inches; precipitation .90 inch.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

APR 2 1921

REPORT FOR WEEK ENDING APRIL 23, 1921.

Akron:

The storm reported at the end of last week netted 2.24 inches of rainfall. The snow was estimated as six inches, though it was practically all to be found in drifts. Since 1.20 inches of this precipitation fell as a drizzling rain preceding the snow, there has been but very little runoff and the value to crop prospects is great indeed. The wind accompanying the storm which has been estimated as high as 60 miles per hour did much damage to property, both in the country and in town. The chief damage done in the country was to windmills, many of which were blown down and otherwise damaged. On the station the corral fence was blown down and the east side of the shelter formerly used by Doctors Shantz and Briggs, and now used as a plant breeding plat, was blown in. In town several plate glass windows were blown in.

Station work the first part of the week consisted of making gates for the sheep rotation pastures. On Friday one four acre increase strip was sown to oats for feed. The last of the week was devoted largely to setting gate posts out on the sheep experiment.

Barley on the rotations and on the sheep rotations has emerged to a good stand. The Cereal Nursery was seeded during the week. Another ewe was taken sick during the week, but she is expected to survive. First lambs came early in the week, - twins.

Maximum temperature 72, on the 20; minimum 18, on the 16; wind velocity on the 16th, for the twenty-four hour period, 32.4 miles per hour, average; precipitation 0.

Ardmore:

Weather conditions have been excellent for prosecuting farming operations, and field work at the station is considerably further advanced than is usual for this time of the season. During the week the rotation plats of flax were seeded. The date of seeding this year was about 30 days in advance of the average date of seeding flax at this station. We have not been very successful with this crop in the past, due to the flax plats being badly infested with weeds. By the early seeding, it is hoped to eliminate to some extent the competition with weeds.

The superintendend of the station recently attended the annual meeting of the Wyoming Stock Growers Association at Lusk, Wyoming. Practically all the large cattlemen of the State of Wyoming are members of this Association, and there were at least three hundred members present at the meeting, including the largest stock growers of the State. The volume of business transacted by the Association annually amounts to several million dollars from the inspection of astray cattle. At the annual meeting the range cattle business was thoroughly discussed, and the optimistic attitude of the cattlemen who have suffered such heavy financial losses during the past year was in keeping with the traditional western spirit. The men engaged in this business will make every effort to put their business back on a paying basis. There was much discussion regarding packing houses and cooperative marketing. The growing sentiment in favor of cooperative marketing was very noticeable.

The superintendent of the station also attended a Community dinner at Oelrichs, thirty miles east of the station on the 23, and in the afternoon delivered and address on the "Business End of Dairy Farming in Fall River County." Some three hundred people including farmers and their wives were present. The interest in dairy farming in this section is growing rapidly from year to year, and the industry is much more important than it was when the dairy work was established at the Ardmore station. A cooperative creamery

Ardmore, continued:

has been operating at Oelrichs for about three years. This creamery has suffered some financial reverses in the past, but on the whole has been a paying proposition. The butter fat produced locally and marketed through the creamery annually amounts to more than one hundred thousand pounds. At the Community meeting there was a noticeable sentiment in favor of supporting this cooperative organization. The local bank is strongly supporting the organization and is urging farmers to milk more cows. The dairy cattle in this community have been greatly bred-up and much improved during the past few years, and the indications are that the industry soon will be on a permanent and a very successful financial basis. There is a great deal of alfalfa hay grown in this section.

Maximum temperature 77; minimum 35; precipitation 0; an average wind velocity 6.1 miles per hour. The figures for the average wind velocity do not fairly indicate the actual conditions. The nights have been calm with unusually high winds prevailing during the days. For the first time in the history of the station considerable difficulty has been experienced with soil blowing.

The total precipitation for the month of April to the present date has been only .02 inch. Spring grain is suffering somewhat for the lack of moisture, as well as from the low average temperature. Native grass is making almost no growth, and the indications are that there will be a short crop of wheat grass hay. The yield of this native hay depends largely upon early spring rains. Alfalfa is considerably behind its normal growth for this time of the season, due to the dry weather.

Big Spring:

The weather for the week has been rather varied. On Sunday morning, the 17th, a hard freeze occurred that did considerable damage to peaches and grapes. However, the temperature only dropped to 29 degrees; but owing to the dryness of the atmosphere seemed to cause the freeze to penetrate deeper than it would have under more humid conditions. On the 21st we had another bad sandstorm in the afternoon, which caused considerable drifting of the soil on some portions of the farm. This damage did not extend to the plats and is believed that no further trouble will be experienced from this source.

Maximum temperature 90; minimum 29; wind velocity 7.0 miles per hour; evaporation 2.13 inches. An estimate of the damage done to fruit in this section will range from 1/2 to 2/3 in most orchards. We still have a chance for a fair crop of fruit on the station unless further freezes occur.

Colby:

The cool weather of the week just preceding and the cool weather the first of this week checked the growth of the spring grains. The spring wheat is up good on all plats and the cool weather has checked it least of all. The barley is up on all plats, but the tips of the leaves are decidedly brown and it shows no appreciable growth made during the week. The oats were apparently coming up nicely until the cool weather held them in check. In fact, some oats that were just sprouting were not able to go forward but remained with the sprouts beneath the ground. Examination at the close of the week showed that they were again starting growth. Winter wheat on all plats except milo and corn stubble and on stubbled-in had the tips of the leaves turned brown and is now about half knee high.

Colby, continued:

No seeding was done during the week. All of the cross-roads were plowed out, leaving the road low in the center. This was done to stop drainage across some of the plats as pronounced water channels were starting in several of the plats. The present plan is to keep the roads slightly lower in the middle so that any runoff from large rains will not damage the plats.

Maximum temperature 77; minimum 16; precipitation 0.

Dalhart:

The wind pressure relaxed somewhat this week. Three days were quite windy, but the remainder of the week has been warmer and less windy. One small shower occurred on the 21, but not in sufficient quantity to do much good. Monday and Tuesday were quite cold with a heavy west and southwest wind.

Winter rye is looking good and making rapid headway. It is now in the straw stage and about eight or ten inches high. It is far ahead of any winter wheat in this section of the Panhandle. Oats seem to be making fair progress. The fields look green but the ground is not covered yet.

There is quite a bit of farming operations going on in this section. Many of the farmers are listing for the spring crop. Some of them went at their work backwards and got their listed furrows filled with sand. They began on the east side of the field and listed west. The heavy winds blowing sand from the west side made good progress in filling the furrows.

Trees and shrubs here got another setback the first of the week. They have managed to get started and leafed out, but hard freezes would come and stop their growth. It is time now that frosts ceased to occur. This (the 23) is the average date for 14 years of the last killing frost.

A picnic was held here Friday night of this week. Everybody had a good time and expressed a desire to come again.

Maximum temperature 85; minimum 19; precipitation .12 inch; maximum wind movement for 24 hours 508.5 miles.

Dickinson:

The weather has been cold and dry, but generally favorable for work. Wheat, oats, and barley were seeded on the rotations early in the week, and oats and barley varieties for the Cereal Office. Farmers in the locality have about finished seeding wheat. The acreage is about average for the county and is going in under better conditions than last year, both as to seed bed preparation and soil moisture.

Director Trowbridge of the North Dakota Experiment station visited the station April 18 and 19.

Maximum temperature 72; minimum 18; precipitation .11 inch.

Garden City:

The growing weather for the past week was very good with the exception of April __, when we had our last freeze. The thermometer dropped down to 24 degrees on this date. This freeze put the small grains back somewhat, but otherwise little or no damage was done.

The blizzard, which swept over such a large part of the country did not hit us very hard, only a small amount of snowfall and wind blowing occurring at the station. The previous freezes and winds killed out some of the winter wheat plats, so that they had to be reseeded to spring wheat.

Garden City, continued:

Neither the commercial field nor the plats of winter wheat seem to be making the growth that they should for this time of the year, especially when the soil contains as much moisture as it now does. Soil samples were taken on the MC series of the winter wheat plats, and they showed good moisture down to a considerable depth.

Sugar beets in this vicinity are being plated now. The are devoted to them will be somewhat less than last year, as the Sugar Company is only contracting the beets for next fall at $6 per ton as compared with $12 dollars last year.

Maximum temperatyre 78; minimum 24; average wind velocity, 2 ft. anemometer 8.8 miles per hour; evaporation .242 inch.

Havre:

A steady wind has blown most of the week, although it has not been extreme at any time. There has been some threatening weather, but only .01 inch of precipitation has been recorded.

Seeding has been progressing as rapidly as possible and has included the varieties of barley, wheat, oats, and peas on the rotations; peas, grains, and sweet clover in the forage crop work; and the seeding of a 90 acre field of durum wheat. The seeding of oats has started on the rotations.

On land that has been worked there is sufficient moisture to start germination where seeding is deep. The surface is drying rapidly and in some cases there is some soil blowing.

Director Linfield of the Montana Experiment station was at this station on the 22 and 23. Professor Murdock of the Agricultural Engineering Department, and Mr. A. J. Ogaard of the Extension Service were also here on the 22. Mr. Ogaard will be in charge of the Farm Boys Camp that will be held here during July for the boys of five of the northern counties.

Maximum temperature 69; minimum 26.

Hays:

The weather during the week has generally been very favorable for plant growth and field work. The early seeded winter wheat, and especially that seeded on fallowed ground is looking fine. It is from four to eight inches high and jointing. A very good stand of weeds may be seen most everywhere except where the ground has recently been cultivated.

During the week most of the winter wheat plats were trimmed, alleys cultivated, and some of the roads were graded. Also some work was done on drainage, ditches, etc.

Soil samples were taken on the MC series of plats of winter wheat.

Maximum temperature 78; minimum 27; precipitation 0.

Huntley:

The balance of the small grain and grass seeding was completed during the week, together with the planting of some of the miscellaneous experiments, including the Dry Land garden.

Continued windy weather has filled the fence rows with thistles from neighboring fields and some time was spent in weed burning.

Light showers have fallen on two days during the week, but the rain was not enough to more than lay the dust.

Maximum temperature 70; minimum 18; precipitation .18inch.

Judith Basin:

The past winter has been one of the driest on record. Only 2.08 inches of precipitation has been recorded since October 1, 1920, and half of this amount was received since March 1. Practically all of the precipitation occurred as light snows, which drifted badly. Stubble land, consequently, derived most of the benefit of the drifting snows and contains an abundance of moisture in the surface foot. Fall-plowed and corn-stubble land, however, are very dry, the latter being almost too dry to permit spring plowing.

Strong winds have prevailed throughout the winter and soil movement has been quite serious. Considerable damage was done to fall grains on summer fallowed, green manured, corn stubble, and fall plowed land. All winter wheat on the continuously cropped series has apparently been entirely killed out, while that on the green-manured, disced corn-stubble, and summer fallowed plats in the rotations is in a very doubtful condition. Wheat seeded on fallow with the furrow drill survived the winter with a fair stand and that seeded on sod in the increase fields suffered no injury whatsoever, and is making a vigorous growth. Winter rye on the rotations is in a very critical condition and may have to be reseeded.

The pale western cut-worm is reported to be very active in several winter wheat fields in this vicinity, but no damage by this pest has been observed on the station.

Field work was commenced about 12 days ago and is progressing very rapidly. With the exception of flax, all small grains have been seeded on the Cereal project and on the rotations in both fields. Seed bed preparation of all increase fields is nearly completed, and 25 acres of spring wheat have been seeded.

Director Linfield is a visitor at the station at this writing.

Maximum temperature 63; minimum 24; precipitation .03 inch.

Lawton:

The past week has been very favorable for field work and spring plowing was completed. All spring plowed and a large number of fall plowed plats were disced. Corn which was planted on the 12 was harrowed the 20 to break the heavy crust, much of it is emerging today, the 23. Manure has been spread on a number of top-dressed and manured plats.

The orchard and shrub groups were cultivated this week, and some work has been done around the lawns. Ornamental and flowering plants have been retarded and injured this spring by the late, severe frosts.

Some work has been done on the road leading to Field C. Bad washouts exist at frequest intervals and a great deal of filling-in has been done this spring to fill these and to prevent further washing.

The weekly frost occurred the night of the 16, when the thermometer registered 28 degrees. The maximum for the week, 90, was recorded today. One or two dust storms occurred this week, and the wind velocity has been comparatively high most of the day time, so the surface soil is rapidly drying. No precipitation has been recorded since the 6, with the exception of .21 inch on the 13. Average wind velocity for the week 8.3 miles.

Mandan:

Horticulture.

All possible advantage is being taken of the favorable conditions existing at the moment, and seeds, fruit trees for replacements, and new plantings, shrubs and such like are being planted wherever planned. The acre Farm Demonstration Garden is almost entirely in seed. The rain of the past week is already making an appreciable difference with the lawns and the budding vegetation.

Mandan, continued:

Agronomy.

As mentioned last week, winter wheat has again proved a total loss under all conditions of treatment. Winter rye has on the other hand come through in perfect shape.

Wheat, barley, oats, and peas have been seeded in the Rotations, and Field P is practically ready to seed for Feed crops. It is expected that this work will be done next week.

A rain on the 19 and 20, amounting to 1.59 inches, delayed field work for about twenty-four hours. This is the largest single rain on record since July 1915, and the spirits of all classes of people in the locality have gone up noticeably as a result.

Maximum temperature 75, on the 19; minimum 30, on the 16.

Arboriculture.

Shipping of stock to cooperators was finished the 20. Stock shipped was as follows: -- Caragana 2,050; box elder 72,800; green ash 10,000; Northwest poplar 16,000; chokecherry 2,050; buffalo-berry 500; W. yellow pine 3,000; jack pine 10,000; spruce (Black Hills and White) 7,000. These were shipped to 435 different cooperators in the States of Montana, Wyoming, and the western half of North and South Dakota. There is included about 3,000 box elders sent out for Arbor day plantings to schools scattered over this area. All Cooperative Demonstrations are treated as experimental plats, and notes are taken on them each summer by the field men.

About 700 hundred, three to four foot jack pines were planted during the rain of the 21 and 22 in the south windbreak. Scotch pines were also planted in several group plantings on the grounds.

Field planting is in progress; Russian olive and Caragana have been planted to date. The solid block plantings in Experiment F-10-4 of the Northwest poplar are being planted at this time.

North Platte:

Fair growing conditions have prevailed during the week. Temperatures have been higher than for the previous two weeks. One shower resulted in a precipitation of .10 inch. The first soil samples for the season were taken during the week. There is a fair supply of moisture in the first two feet.

Corn plants were plowed April 18 and 19, and all summer tilled plats have been disced.

Tucumcari:

Several days during the week it was overcast with indications of rain, but there were no showers. Two days were quite cold and four days were windy.

There was no soil blowing on the station except a small area at the southeast corner of the south field. This was gone over with the lister Monday morning as well as several places that were about in the right stage to blow. The center field was cultivated to get the plats in shape again to withstand another blow. Winter wheat and rye are alive but making very poor headway. A good rain is needed here to give things a good start and to get the south field soaked up a little so it can be worked again. The east quarter of this field has been worked until it will be useless to go over it again until it rains. It has stood the winds in good shape, but it has been a task to keep it from blowing away. Every other field in the country has been blowing terribly. One field about half a mile west of the station has piled sand along the road to a depth of three feet and more.

Tucumcari, continued:

On Tuesday of this week the steers in the steer feeding experiment were slaughtered. They were in fine shape for market and it was no trouble to dispose of the meat. The killing and dressing was done at the station. The meat was taken to town Wednesday morning and distributed to the three butcher shops. The hides brought practically nothing, averaging $1.09 per head.

On May 1 the cow maintenance feeding work will close and the cattle will be taken to the upper pasture for the summer. A good calf crop is expected this spring. Just before calving time the cows will be brought again to the south field so that calf weights, dates, etc., can be taken care of to better advantage. There is considerable loco in the south pasture but the cattle have not taken to it yet. There is none in the upper pasture, so it is hoped that the cattle will keep off it until May 1.

Mr. Luther Foster, Animal Husbandman from the New Mexico State College was a station visitor this week. Mr. L. N. Jensen of Amarillo was also a station visitor in company with the County Club Agent and a member of the Extension Service at the State College. Mr. Jensen is being considered for County Agent of Quay County, to fill the vacancy left by the resignation of Mr. Yates.

Woodward:

The first two days of the week were rather cool, with a minimum temperature of 29 degrees on the 17. The latter part has been warm and windy with rain threatened a couple of times.

Most of the trees are fully leaved out and are beginning to make a rapid growth. Most of the grapes have started to grow and a good many of them are showing the clusters of buds. Winter wheat and rye are looking good and the rye is heading rapidly.

The first planting in the Cereal Office Date of Seeding Experiment was done the first of the week. Considerable plowing for spring crops has been done. Three plats in the New Method of Seedbed Preparation experiments have been listed and one plat plowed for peanuts. Some pruning has been done on some of the trees in the windbreaks and some other trees.

Maximum temperature for the week 82; minimum 29; average hourly wind velocity 9.1 miles; evaporation 1.874 inches; precipitation Trace.

MEMORANDUM FOR FIELD MEN, OFFICE OF DRY LAND AGRICULTURE

A few simple rules, the observance of which will tend to improve composition in News Letters and Reports.

There appears to be a lack of certainty and consequently much confusion in the use of cardinal and ordinal numbers in connection with dates. The following instructions are from the rules of the Government Printing Office: Write June 20 (not June 20th), but the 20th of June; the 20th day of March; the 1st (day) of the month; the first (part) of the month; 4th of July (calendar day); Fourth of July (holiday).

Spell such expressions as "the early seventies."

When a fiscal year or a year extending into a following year is intended, use a dash and contract, except 1900-1901, as 1875-76, 1901-2; if a period of more than two years is intended, do not contract, as 1875-1879; if two or more separate years are intended, use comma, as 1894, 1895.

Use a comma after the word precedeing "and", "or", or other connective in a series of three or more words or phrases like "wheat, corn, and oats;" "the upper coal is 21 inches thick, the parting 12 inches, and the lower coal 32 inches." Use a semicolon instead of comma if the other members of the series are separated by semicolons.

Generally avoid use of the personal. Say, "the corn was cultivated," rather than "we cultivated the corn," or "our corn was cultivated." Say, "there was 2 inches of rain," or "the precipitation was 2 inches," rather than "we had 2 inches of rain."

Do not use simplified spelling.

E. C. CHILCOTT,
Agriculturist in Charge.

JSC/-

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

APR 30 1921

REPORT FOR WEEK ENDING APRIL 30, 1921.

Akron:

This region continues to have warm weather interspersed with snow storms. Wheat is making progress and right now seems to promise as much wheat as last year, at this time. Pasture grasses, native sod especially, have not made any noticeable progress. We now have plenty of moisture and it is only a matter of time until warm weather sets in before they do.

Work for the week has consisted in rebuilding the corral, in setting gate posts on the sheep rotation fields, and in setting up the repaired windmill. Some time also was spent in the Cereal Nursery.

Maximum temperature 79, on the 24; minimum 27, on the 26 and 23; precipitation .37 inch.

Ardmore:

Plant growth has been much retarded during the week by the low average temperature for this time of the year, as well as by a shortage of soil moisture. This is particularly noticeable in the growth of native hay and pasture grasses. The range and pastures generally are much behind their normal development. In some sections there is an actual shortage of stock water which is very unusual for the spring months.

Work at the station during the week has consisted largely of repairing fences and similar work. When this station was established in 1912 pitch pine posts obtained from the Black Hills were used for constructing fences. A considerable number of the posts which were set that year are being replaced at the present time. It is found, however, that all posts that were well filled with pitch are practically as good as new after being in the ground for nine years. It is only the dead pine posts, containing very little or no pitch that must be replaced at the present time.

Arrangements were completed during the week for securing 60 head of steers which are about eighteen months old for use in the grazing pasture during the coming season. A nice uniform bunch of steers was secured.

Dairy work at the station is progressing nicely. During past seasons contagious abortion has caused much trouble in the herd. No calves of the present crop have been lost from this cause. Eighteen cows are being milked at present and one cow still is to freshen. All the cows are making good records. One cow which freshened during the month of April is regularly giving better than 80 pounds of milk daily. This amount of milk is a record for this station. The previous high record for a single day was 76 pounds. Sunflower silage is being fed to the entire herd. It is of poor quality and is not relished by the animals.

Maximum temperature 69; minimum 22; precipitation .50 inch. The toral precipitation for the month of April, .52 inch. The eight-year average precipitation for the month of April at this station has been 2.75 inches, and the total precipitation for the same month a year ago was 3.75 inches.

Big Spring:

The week has been dry and windy, though no severe sandstorms have occurred this week. The total rainfall for April was .11 inch, which is 1.65 inches below normal. On account of the dry weather, farm operations are practically at a standstill. Winter wheat in the c.c. and rotation plats is suffering badly for moisture and a good rain will have to come soon to save the crop. The date plantings made on April 15 did not come up to a good stand and will have to be replanted when it rains. No more date plantings will be attempted until conditions change.

Big Spring, continued:

Maximum temperature 91; minimum 40; wind velocity 6.0 miles per hour; evaporation 2.61 inches; precipitation 0.

Colby:

Except for the last two days of the week the spring grains did not make any growth. Continued freezing weather at nights during the week, with no warm days, held back all plant growth. The roads and alleys were disced and harrowed to level during the week. Some work was done on the plats that require spring treatment to keep down weed growth. Work on the farm was confined to cleaning up around the farm and preparing plats for sorgum varieties and corn varieties. This consisted in cultivation to kill weeds and volunteer wheat.

Of the spring grains the oats seem to be injured most by the low temperature reached the night of the 9th of April. The spring wheat on all plats is showing to a good stand. The barley shows that it was hurt by the freeze, but not to the extent that the oats were.

Maximum temperature 76; minimum 26; precipitation .065.

Dalhart:

Conditions have been more favorable this week than in the past. The wind movement has been within safe limits most of the week. On Sunday, April 24, there was one of the worst windstorms of the season. The wind blew until well after sundown. The day was threatening: It rained, was cool, and the air was full of blowing sand. There was no resultant damage from soil blowing on the station, but at time sand would be picked up and it looked as if the whole station would move. The orchard started to move, but no damage resulted. None of the plats blew. Out of all this there was nothing but a trace of moisture. Several days have threatened rain but none has fallen.

Field work for the week has varied a great deal. The first of the week the plats for the first date were disced. These were plowed and harrowed Friday. The first date of planting was made on the 30th. The soil moisture conditions at this time are favorable. Some plowing was done on the increase plats during the week. From one to two teams have been busy this week in hauling and field work. Some pruning is still being done.

Winter rye is heading at a height of about one foot. Oats is making good progress, nearly covering the ground at this time. The winter wheat is this section is reported to be looking good, but needing rain. Some of the farmers have pastured their wheat during the winter and report stock in good shape as well as the wheat looking good.

Maximum temperature 86, minimum 26: Three nights of this week the temperature dropped below freezing. The last frost to date occurred on the 28th.

Dickinson:

Cold weather has continued during the week, but there was no rain until last night, and field work has moved along well. A rain and snow storm amounting to .57 inch last night made the soil too wet to plow during the forenoon. This moisture all went into the soil and will be of much benefit as the surface was becoming so dry that seed did not germinate uniformly. Wheat seeded April 2 has emerged. Plant growth has been very slow owing to the low temperature.

A small orchard has been planted during the week with stock from the Northern Great Plains Field Station and nurseries. This consists of promising varieties of plum, crab, sandcherry, compass cherry, juneberry, and currants; also, gooseberry, raspberry, and strawberry. Several of the varieties were

Dickinson, continued:

planted several years ago and failed. The site of the present planting is protected on three sides by an effective windbreak and since most of the varieties are on hardy stock, it is possible that they will survive. The only thing that has persisted from previous planting is a number of Siberian crabs.

Maximum temperature 61; minimum 18; precipitation .60 inch.

Havre:

During the last week there has been precipitation recorded on six days, totaling .31 inch. There was not enough to interfere with field work until noon on the 29th at which time there was a sudden drop in the temperature followed by about two hours of heavy snowfall.

The varieties of oats and the oats on the rotations were seeded during the week, and the seeding of small grains was completed on the larger fields. Grasses and some root crops were seeded and the forage project cleaned of weeds. Some of the alfalfa has been gone over with a spring tooth harrow and land in the bottom prepared for seeding alfalfa this spring.

There are a few fields in the community that are emerging. The earliest of the station seeding is just through the ground. Some farmers report damage done by worms, but there is no proof as yet that this is caused by the Pale Western Cut Worm that caused so much damage in this locality last spring. It is apparently the wire worm that is working at present.

Hays:

The past week has been a good one for field work. All winter wheat that survived the winds and freezes, is making a heavy growth and looking fine. Spring sown grains are also making good growth.

The annual stockmens "Round-up" is being held today. There are about 1,000 visitors present and considerable interest is being displayed in the results of the feeding and breeding experiments which are being conducted at this station.

Huntley:

Weather during the week has been cool and cloudy with high winds and frequent light showers and snow flurries. The precipitation at any one time, however, has not been enough to more than lay the dust.

The first round of soil samples was completed today. All samples were taken to a depth of six feet. All plats cropped last year to corn or small grains are very dry below the surface - first few inches. Fallow plats are well filled with moisture to depths varying from three to four feet. The condition of the plats receiving green manure last year is about the same as the fallow plats.

Winter wheat has made no noticeable growth during the week, but it appears to have a more healthy color. Winter rye in the green manure rotations has come up until a fair stand is in evidence.

Director Linfield of the Montana station and Mr. J. M. Stephens were visitors here this week.

Maximum temperature 73; minimum 20; precipitation .06 inch.

Judith Basin:

The past week has been exceptionally cold with unusually high winds prevailing every day. Except for a couple of flurries of snow which merely served

Judith Basin, continued:

to interfere with field work for a few hours; no precipitation was received. A total of .50 inch of precipitation occurred during April as compared with 5.37 inches in April last year, and a normal rainfall of 1.37 inches. Of the .50 inch recorded for this month, only .10 inch has been received since April 7.

The continued dry, cold, windy weather has been very unfavorable to crop growth. Winter wheat and rye are in a more critical condition than when reported last week and unless a rain is received soon, all winter wheat plats on the rotations will have to be reseeded. Alfalfa, brome grass, and clover have been checked and remain at the same growth for the past two weeks.

Maximum temperature 53; minimum 20; precipitation .06 inch.

Lawton:

Wheat and oats need rain, while the stand of April 15 date plantings of grain and forage sorghums is poor, due to lack of sufficient moisture to germinate many of the seeds. The last rain of any consequence was on April 5, and the soil is very dry to a depth of several inches.

A number of fall plowed plats were disced early in the week and the May 1 date plantings were made today, the 30th. That comprises practically all the field work done this week, as we have spent the remainder of the time completing fills on the road through the station and widening the dam of the pond. From 600 to 800 cubic yards of dirt has been moved this spring in an attempt to put the road in good shape. We have worked one and a half days widening the pond dam and will require about four more days to complete the work, moving about 600 to 800 cubic yards of earth and increasing the width of the dam about fifteen feet.

Maximum temperature 90; minimum 42- average wind velocity 7.2 miles; precipitation .07 inch.

North Platte:

Conditions for the week were rather unfavorable for crop growth. Frosts and light freezes are occurring every night. Several showers have occurred during the week, but the total of these is only .30 inch. Corn land is being prepared and some ensilage corn will be planted at once.

Maximum temperature 60; minimum 28 to 31.

Scottsbluff:

Continued cold weather prevailed through the entire week. The minimum temperature every night being below freezing. Scarcely any sunshine occurred during the week. A slight hail storm on the 27th did no damage. Two small showers, totalling .31 inch occurred the first of the week.

Alfalfa and sweet clover plats were seeded during the week. Field peas for green manure also were seeded. Preparation of corn plats was completed and these will be seeded the coming week.

A carload of fat lambs which were used in the experimental feeding tests on the station during the winter were shipped to market. These lambs at present prices will show a considerable loss. Livestock feeders all over the project are losing heavily this year on all their feeding operations.

Maximum temperature 81; minimum 24; precipitation .31 inch.

Sheridan:

The past week has been cool and cloudy and exceptionally windy for this

Sheridan, continued:

region. Squalls of snow and rain were frequent, but without sufficient moisture to be of any effect. Winter grain for the most part is not looking as good as some time ago, because of the blowing. Land fallowed last year has been blowing more or less all the spring, but has been worse for the last three days, including today - Sunday - than at any time since the 1st of March.

All of the rotation plats with the exception of the flax and corn have been seeded. The wheat and oats had begun to emerge by the 29th and 30th, but have been effected some by blowing since. The varieties of wheat, oats, and barley were seeded on the 20th and 21st. Plowing for the corn in the rotations has been completed, and ground is now being plowed for the varieties and bulk seeding. Stubble land plows in fairly good shape, but does not work down very good, and all ground that has been plowed is drying out fast near the surface.

Maximum temperature 62; minimum 29; precipitation, Trace.

Tucumcari:

On Sunday the 24 one of the worst wind storms of the season occurred. The south field blew nearly all the lister furrows full. This field has been worked so much to prevent blowing that only a part of it can be prepared against it again. The east half has reached a stage that only a good rain will save it.

This week considerable road work has been done, getting the road along the station clayed and shaped for travel. Outside of hauling water to the cattle no other team work was done up to and including the 29th. Today -April-30, the plats are being prepared for planting of the first date. This planting is made in the south field but on the part that did not blow. This planting is being made on land that was planted to cowpeas last year. A planting will be made on May 2 if weather permits.

The range cow maintenance work will be closed for this year p on May 1 - and the cattle removed to the north pasture. This pasture was just recently leased and the fences repaired for receiving the cattle.

Woodward:

The week opened with a continuation of the high winds of the latter part of the previous week. The latter part, however, has been rather cool and quiet. We have had a measurable quantity of precipitation on four dates, but not enough to do any good. Wheat which was planted in the roads on the D.L.A. project to prevent blowing is fixing badly in places, and the wheat on the plats is beginning to show the lack of moisture.

Some cultivation was done early in the week to prevent soil blowing. The orchard and vineyard have been disced and a considerable amount of plowing done. The second date planting on the Cereal Office Project was planted on the 30th. One plat of peanuts has been planted. About 8,000 to 10,000 grape cuttings were mailed out during the week.

Messrs. G. M. Rommel, C. W. Larson, from Washington, D.C., and H. G. Knight and James A. Wilson of Stillwater, Oklahoma, were visitors at the station on the 25th. Mr. Chilcott left for Dalhart, Texas, on the 29th.

Maximum temperature 94; minimum 39; average wind velocity 7.3 miles; evaporation 1.850 inches; precipitation .20 inch.